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ABSTRACT

This paper examines how block scheduling affects teachers' perceptions of school climate. It is based on information taken from 21 high schools in a southern state that used 4X4 block scheduling. Data were collected through interviews, a survey instrument that measured teacher perceptions of climate, and focus groups. Based on results from the climate instrument, 2 schools with at least 3 years experience with block scheduling were identified as outliers: 1 positive, 1 negative. Both were comprehensive, public high schools that enrolled students in grades 9-12. Findings include descriptions of the school context, administrative structure, student discipline, faculty collegiality, obstacles to teaching, staff development, and block scheduling. Teachers at both schools commented on improved discipline and academic performance, though teachers at the negative outlying school believed that the administrators' laissez faire style and inconsistency in handling discipline undermined disciplinary efforts. In the positive school, visionary leadership, professional activities in a departmental structure that encouraged collegiality, and a commitment to uninterrupted instructional time contributed to high teacher satisfaction. An inequity in funding was seen as one contributing factor to the different experiences between the two schools. Three tables contain information on demographics, achievement and student participation, and dimensions of contrast between the two schools. (Contains 22 references.) (RJM)

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Does Block Scheduling Live Up to its Promise?

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Does Block Scheduling Live Up to its Promise?

EA 030502

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During the early 1990s, Congress appointed the National Commission on Time and Learning to study the use of time in schools. In its report, *Prisoners of Time* (1994), the Commission strongly criticized the rigidity of the high school schedule, calling it an impediment to learning in secondary schools. In response to this and similar indictments (e.g., Sizer, 1986), and as part of the restructuring effort in America, many secondary schools adopted forms of intensive scheduling. In fact, redesigned high school scheduling (Cawelti, 1995) gained a reputation during the 1990s as an inexpensive and easily implemented reform tool (Canady & Rettig, 1995).

While many variations of intensive scheduling have been developed, the most widely used is known simply as '4X4' block scheduling (Canady & Rettig, 1995). This format divides the school day into four 90-minute instructional blocks, with students completing four courses per semester and eight courses per year. The scheduling format simplifies the academic life of students by allowing them to have fewer courses, teachers, textbooks, and assignments to contend with at one time. There are also advantages for teachers, whose professional life is simplified by teaching three 90-minute periods per day, gaining additional preparation time in a 90-minute block, and having only 75-90 students per semester as opposed to the usual 135-150 students in a traditional high school scheduling format.

Block scheduling proponents claim several additional advantages. These include allowing students and teachers to spend longer periods of time together, thereby reducing students' sense of isolation as well as personalizing the school climate (Kruse & Kruse, 1995); promoting better achievement by reducing curricular fragmentation (Canady & Rettig, 1995; Reid, 1996); and fostering greater teacher professionalism (Cawelti, 1994) by providing more time for collegial planning and interaction. Furthermore, the use of block scheduling is said to enable the design of more interactive learning activities (Queen, Algozzine, & Eaddy, 1997), and to reduce the number of discipline problems (Canady & Rettig, 1995) by reducing the number of student transitions between classes during the school day.

As Hackmann (1995) points out, these anticipated advantages have direct impact on school climate. Organizational climate has been described as the feel or atmosphere of an organization (Hoy & Miskel, 1996), and also as a quality of a work environment that endures over time and affects behavior of workplace participants (Halpin & Croft, 1962). With climate influenced by leadership style as well as by the personalities of all who interact within the work environment, it is most frequently characterized based on the collective perceptions of employees in a work setting (Hoy & Miskel, 1996).

Research has identified components of climate that promote school effectiveness. Among these are administrative organization, teacher decision-making participation, collegial relationships within work settings, and expectations for student behavior and learning (McDill & Rigsby, 1973; Rutter et al., 1979).

Much as been written about the anticipated benefits of block scheduling, such as improved school climate and student achievement, yet little empirical research has been done. The present study examining the effects of block scheduling on teachers' perceptions of school

climate. This paper provides empirical findings by presenting case studies concerning the organizational climate at two high schools that had 3 years of experience with block scheduling.

Methods and Data Sources

The present research is part of a larger study that took place in a southern state and involved the collection of quantitative data concerning teachers' perceptions of school climate. All high schools in the state that used 4X4 block scheduling were identified. Of the resulting 44 schools, 21 were selected for study and agreed to participate. The 21 schools were divided into three groups of 7 schools each, with one group of schools having used block scheduling for 3 or more years.

Both quantitative and qualitative data were collected. Qualitative data were gathered through individual and focus group interviews. Individual interviews lasted approximately 30 minutes. Teachers were selected for interviews using a proportional, stratified sampling scheme (Patton, 1990), with 12% of the core subject area (English, mathematics, science, and social studies) teachers at each school interviewed. A seven-item, standardized, open-ended protocol (Patton, 1990) was developed to guide the interviews. The protocol asked teacher opinions about school leadership, student discipline, faculty collegiality, staff development, and attitudes toward block scheduling. Face validity for the protocol was established using a panel of experts (Gall et al., 1996; Tashakkori & Teddlie, 1998). School administrators were also interviewed. Field notes were taken and information checked for accuracy during and after the interview.

Focus group interviews lasted approximately 60 minutes. The seven-item protocol used in the individual interview was also used for the focus groups. The group interviews were audio-taped, with the tapes later transcribed in their entirety. The data were analyzed at the school level using content analysis, including unitizing and categorizing the data elements (Lincoln & Guba, 1985).

A survey instrument was used to obtain quantitative data about teacher perceptions of climate in all 21 schools. In addition to seven items seeking demographic data, the questionnaire included a 17-item subscale of the National Education Longitudinal Study (NELS) 1990 First Follow-up (see Ingels et al., 1992; Taylor & Tashakkori, 1995), five additional NELS items measuring perceptions of student discipline, and four researcher-constructed items based on the block scheduling literature. Of the 1,320 questionnaires that were distributed, 883 were returned, for a response rate of 67%. Construct validity was established through a principal components analysis (Nunnaly, 1978) with an oblique rotation. Four factors emerged, including student discipline, faculty collegiality, student characteristics that affect teaching effectiveness, and time constraints. Cronbach's alphas for the four factors, respectively, are .85, .83, .69, and .69.

Based on the overall results from the climate instrument, two schools with at least 3 years experience with block scheduling were identified as outliers—one positive, one negative. Both were comprehensive, public high schools which enrolled students in grades 9-12. Student participation in the free and reduced-price lunch program, which was used as an indicator of relative poverty of students in the school population, was identical in the two schools, at 34%. These and other relevant demographic data are presented in Table 1.

Results

This section features a separate case study for each school, including a description of the school context; a description of school administrative structure, student discipline, faculty collegiality, obstacles to teaching, staff development, and block scheduling; and a case summary. Tables 1 and 2 present demographic, achievement, and participation data for the two schools.

Frankfort High School

Context. Frankfort High School, identified as the positive outlier, was located in a suburban district, linked by highway to a nearby major metropolitan area. Compared to others in the state, the district was relatively affluent, with a per capita income that exceeded the state average by $1,000. Area industries generously supported local education, often underwriting grants that provided large sums of money over multi-year periods. This and a solid tax base allowed the district to provide competitive teacher salaries, with average full-time teacher salary well above state average. Likewise, per pupil expenditure was high by state standards. Many residents settled in the area due to the progressive school district.

One of two consolidated high schools in the district, Frankfort was attended by 1,450 students, of whom approximately two-thirds were European American and one-third were African American. The percentage of faculty having at least a Master's degree was above state average. The principal described general ability level of Frankfort students as average, and a high percentage of students attended college.

Academic indicators suggested that block scheduling had a positive effect at Frankfort over the 3 years of its use. American College Test (ACT) scores showed a slight upward trend, with the overall composite score rising by 0.4 points. On the state graduation exit examination, passing rates in language arts rose by 5% and in mathematics by 1%. During the same period, the state average rose 1% in language arts, but decreased 1% in mathematics.

Also showing slight improvement were figures for student attendance, which rose by 0.4%, and dropouts, which decreased by 0.7%, with both indicators above state average. While in-school suspensions rose 6.7%, out-of-school suspensions dropped dramatically to almost zero. Both the out-of-school suspension rate and the expulsion rate were well below state average.

Administratve structure. Two principals and two assistant principals formed the Frankfort administration. One principal had a conventional role, while the second principal headed a school-within-a-school for the small populations of gifted and low-performing and/or learning disabled students. Across the board, interviewed teachers gave the administrators credit for good discipline, academic emphasis, support of teachers, and excellent organizational skills.

Evidence of the emphasis placed on teachers' work with students is seen in the allocation of resources. Personnel were hired to relieve burdens normally placed on teachers. These personnel included a full-time attendance clerk to handle absence and tardy paperwork; a full-time copy clerk to handle teacher copy requests; and monitors to supervise the student parking lot, cafeteria, and campus during break time. Additionally, a full-time staff development coordinator planned a coherent professional development program.

An effective communications network existed at Frankfort. Printed daily bulletins minimized use of the intercom. Interviewed, teachers said there were no interruptions of class time, "never, that's a no-no."

Student discipline. Teachers said administrators were "very good about discipline." An assistant principal in charge of the discipline program followed a step procedure involving detention, suspension, and, in severe cases, expulsion. Any student booked for a legal problem attended school at an alternative site. A full-time campus security officer worked at Frankfort and, according to teachers, had an excellent overall relationship with students.

The principal said most disciplinary infractions resulted in in-school suspensions, and that less than 1% of incidents led to out-of-school suspensions. Full-time personnel staffed a centralized in-school suspension program. Student assignments were collected from teachers, and the students were monitored as they worked. Suspended students were isolated from the general population, not allowed to interact with others at all on suspension day(s).

The high standard of vigilance at the school had a proactive rather than a reactive overtone. Teachers were required to stand outside of classroom doors during student transitions, and teachers said this was regularly monitored by the principal. The student dress code was strictly enforced. The most frequent cause for discipline referral was inappropriate language with teachers, which the interviewed teachers described as minimal. According to both administrators and teachers, absenteeism, tardiness, and class cutting were not problematic at Frankfort, with the student attendance rate at 94%. Observers noted smooth student transitions between classes, and that students remained in classrooms during instructional times.

According to both the principal and the interviewed teachers, fighting had been drastically reduced during the prior two years. Local authorities assisted in enforcing a "zero tolerance" policy regarding fighting. All instances of student fighting were handled immediately. The police were contacted, the involved students picked up, the parents required to pay a $250 fine when claiming their children, and both students and parents required to attend counseling sessions before the child could be reinstated at school.

Regarding contraband, most teachers indicated an increasing drug problem in the community; however, they said there was no drug problem at school. Preventative procedures made it difficult for students to have drugs at Frankfort. All students entered the school at a central door, where monitors were on duty. Both the principal and the teachers who were interviewed said random student searches were regularly conducted for drugs, weapons, and beepers or cell phones. Additionally, there were frequent random checks of student bags and lockers, and drug dogs were brought in at least twice each year, more often if there were probable cause.

Teachers said that although there were gangs in the community, gang membership was not visible at school. Illustrating the positive school environment, one teacher said, "I don't think anybody wants to come on campus and be identified as a gang member. It's just not cool, not done. Not the status quo."

Faculty collegiality. Frankfort teachers described cordial, cooperative, sharing relationships with "no one-upmanship," claiming Frankfort teachers had "the utmost respect for each other." They spoke of good working relationships, adding that peer tutoring was regularly used at the school. The administrative structure extended to the departments. The school operated with site-based management, using a team approach to promote good communications between and among departments. Department heads served on the team, with the role regularly rotated within departments so that all faculty members had an opportunity to participate in management.

Department chairs were given two unencumbered blocks, one to attend to paperwork duties inherent in the position, and a second to plan for instruction. The department chair received and checked colleagues' lesson plans for consistency with state curriculum benchmarks and standards, and for the inclusion of at least three instructional strategies, including hands-on activities, per period. Further, the chair engaged in formative supervision of department colleagues; met weekly for site-based decision-making; and reported back to colleagues through regularly scheduled departmental meetings. This structure prompted one teacher to describe the school as "a well-oiled machine," and teachers voiced satisfaction with working conditions and the "professional environment." Both faculty and students worked toward goals for increased student achievement. Teachers worked on individual professional development plans within departments, using peer coaching to assure quality of instruction. An assistant principal said that as the school grew and the faculty expanded, departments took on a new emphasis to provide for teacher support and collegial relationships.

Obstacles to teaching. Despite the good organization, Frankfort teachers described several obstacles to teaching. Some teachers said that too much time was taken for staff development at the expense of instructional planning, although they acknowledged that most teachers benefited from the training provided. They described as a negative effect of the 4X4 block schedule the "frantic" pace. One teacher said things moved at "roughly double-time," with some form of progress reporting issued approximately every two and a half weeks. Some teachers who were interviewed also said that team meetings and staff development demands compromised their available time.

Interviewed teachers also complained about paperwork demands, especially assignments for in-school suspended (ISS) students. Often, teachers said, they were not notified to send work for ISS students until just prior to first block, when teachers could not take the time to prepare and send assignments, yet they were rushed to get paperwork to ISS personnel immediately. Communications between teachers and ISS personnel were described as "very poor," due to inadequate advance notice about students in ISS. Teachers expressed that ISS demands on their time were excessive, in that they had to notify the parent, then write a student referral, and finally provide written assignments for the student in ISS.

In interviews, Frankfort teachers described students as having good attitudes and being quite capable. At the same time, teachers said many students were "extremely lazy," with a low tolerance for frustration when trying to figure things out for themselves and, as one teacher said, "a hesitancy with critical thinking." Another teacher elaborated, saying that most students "want the teacher to just lay things out clearly, and then parrot that back on a test, but that's not

really what we're trying to do here." Teachers also described younger students as lacking a sense of responsibility for their own learning, and at-risk students who were far below grade level, with significant skill level deficiencies. According to teachers, many juniors and seniors had after-school jobs that seriously interfered with teaching and learning. These students reported to class tired, and had as their priority just getting through the class so they could make it to work later. One teacher explained that students knew "almost immediate rewards with that paycheck they're getting weekly, and here we are trying to explain to them Milton or Frost."

Staff development. As suggested earlier, staff development was a priority at Frankfort. This proactice stance regarding staff development was fostered at the district level. Teacher attitudes toward new ideas and professional improvement were described as "aggressive" and "kind of refreshing" by two of the teachers interviewed who were new to Frankfort. Interviewed teachers said most faculty members were willing to work for improvement, open to new ideas, and positive toward attempts to institute change. A new teacher found meetings on teaching strategies to be particularly worthwhile, with good transfer into his classroom.

Frankfort had an on-going commitment to staff development, with time built into the schedule for teachers to meet regularly for professional development as a group every other week. Additionally, teachers met weekly either before or after school in small "study groups" to work on three broad school goals. Frankfort's staff development was described as including workshops focusing on instructional strategies (e.g., cooperative learning, reading strategies, multiple intelligences), writing projects, assessment portfolios, and state testing. In interviews, teachers said the training usually carried over into teaching, planning, and classroom activities, with one teacher saying "everybody does some kind of portfolio" for student assessment.

Interviewed teachers indicated that prior to block scheduling implementation, the district, rather than the school, provided professional development. Several newly hired teachers said they had no experience with block scheduling before being hired at Frankfort, but during the summer were paid to participate in more workshops than "we cared to attend." However, they said the in-servicing was helpful, geared toward teaching strategies for productively using 90 minutes of instructional time, and their transition to block scheduling was smooth.

According to interviewed Frankfort teachers, goal-oriented and site-specific staff development was "driven by the school improvement plan." At the time of the interviews, the staff was engaged in study groups that worked on the three broad school goals. Teachers chose the goal in which they were most interested; formed groups to study the issues weekly at a place and time convenient to the group; and also engaged in bi-weekly, whole-faculty sharing sessions. Groups were either intra-disciplinary or inter-disciplinary, depending upon who chose to work together. While teachers said some of the staff development time may have been more productively used for planning, they conceded that it was time well spent.

Block scheduling. According to the teachers interviewed, they voted overwhelmingly to implement block scheduling at Frankfort, hoping that student absenteeism and dropout rates would improve with block scheduling. Additionally, teachers hoped there would be greater innovation and variety of instructional strategies, better student focus, and improvement of student grades and standardized test performance. As Table 2 shows, absenteeism and dropout

rates as well as standardized test performance did improve. Teachers said the 90-minute instructional format allowed a topic to be fully explored, with students remaining focused on the topic for the amount of time needed to bring it to conclusion. In contrast, one teacher commented that "everyone was frustrated" by the constant breaks in concentration that occurred with 50-minute periods.

Interviewed teachers unanimously wanted to continue in block scheduling, praising the flexibility and the opportunities for students to be "more active learners" with the 90-minute format. Several challenges presented by block scheduling were also expressed. The difficult pace was revisited, with teachers feeling pressured to cover a great deal of material in only one semester. Staying organized was difficult, and good time management was needed.

Summary. Compared to state averages for student attendance and academic indicators, Frankfort was above average. Block scheduling positively affected standardized test results, attendance, and dropout rates; and the school's suspension of students took on a more in-school than out-of-school emphasis. According to teachers, block scheduling allowed better focus for students, and promoted active rather than passive learning.

Teachers said administrators were organized, maintained discipline, emphasized academics, and supported teachers. Good communications within and among departments encouraged teacher collegiality. Teachers perceived colleagues as dedicated professionals who were open to change and willing to help colleagues. Driven by the school improvement plan and focused on improving instruction, goal-oriented and site-specific staff development was transferred into the Frankfort instructional program.

Blingham High School

Context. Blingham High School, the negative outlier, was located in a rural school district. Unlike Frankfort's affluent district, Blingham's district was below the state average for per capita income. School district funding rested upon a limited tax base, and both per pupil expenditure and average teacher pay were below state average. Exacerbating these circumstances, neighboring school districts served student populations that were ethnically and economically similar to Blingham's district, but those districts were financially better supported. In fact, the Blingham principal said that hiring well-trained, certified teachers was a problem, due to a below-average pay scale and to location, since the school was far removed from heavily populated areas.

Blingham was the only high school in its small district, in which several elementary schools fed into consolidated middle and high schools. It was attended by 870 students, of whom 60% were European American and 40% were African American. Unlike Frankfort, the percentage of faculty with at least a Master's degree was below state average. The principal said students were of average general ability, yet the percent of college-bound students was low.

As shown in Table 2, academic indicators suggested that the 3 years in the block scheduling format had a minor but overall positive effect. ACT composite results showed a slight upward trend, with scores increasing by 0.1. Passing rates on the graduation exit examination in language arts showed a 3% gain, however, for mathematics, there was a loss of

4%. In comparison, the state average rose by 1% in language arts, and decreased by 1% in mathematics.

Contrary to claims in the literature that block scheduling would improve student attendance, Blingham student attendance worsened by 2.7% over the 3-year period, with the gap between state average and the below-average Blingham attendance rate widening from 0.1% to 2.8%. However, a 1.7% decrease in student dropouts during the period placed Blingham above state average by 0.3%. These two indicators suggested that perhaps students who were regularly absent were potential dropouts--students who had not yet dropped out but intended to do so.

Not all indicators were negative, however. At Blingham, in-school suspensions decreased by 0.8% while the state average rose by 3.3% during the period. Both out-of-school suspensions, which decreased by 1.3%, and expulsions, which decreased by 0.9%, were also well below state average. The large relative decreases for in-school suspensions as well as out-of-school suspensions and expulsions could signal that either there was relatively less discipline trouble at the school during the period, or there was less done about discipline at the school. The latter seemed more likely the case when these findings were triangulated with teacher interview data, which indicated a laissez-faire administrative stance on discipline.

Administrative structure. A principal and two assistant principals (AP) formed the administration at Blingham. One AP concentrated on instruction (API) and the other focused on discipline (APD). Teachers indicated that they respected the job done by the API, who was a ready and willing resource for teachers. In general, the other administrators were said to be supportive of academics, and willing to allow change provided the teachers did the work.

Unlike Frankfort, where teachers said all administrators were effective, Blingham teachers said the APD simply did not do a good job and that the principal was only slightly more effective when it came to discipline. The principal was characterized as a nice man, "jovial and well-liked, but not a go-getter." Teachers had to handle classroom problems, and sometimes just one disruptive student was able to prevent teaching from going on. One teacher said, "When we write them up, students say to us, 'It's just a piece of paper,' and smile at us when they return."

According to teachers, although both the district superintendent and the secondary instructional supervisor were supportive of educational professionals, the school board often was likely to bend to political pressure. Teachers felt the board's past unpredictable performance and general failure to back educational personnel in discipline matters may have contributed to the Blingham administration's laissez-faire stance on discipline. This lack of support in the district was in direct contrast to the demonstrated district- and school-level support which Frankfort teachers enjoyed.

Just as at Frankfort, there were department chairs and written departmental communications at Blingham. However, unlike Frankfort, there was little collaborative planning within Blingham departments, and infrequent department meetings. Blingham administrators were not involved in instructional planning. In fact, teachers turned in lesson plans but questioned whether administrators actually read the plans, saying "we don't get any feedback," and "I know some people who have submitted the same three plans all year, and no one ever

realized it was being done." This laissez-faire administrative style no doubt contributed to the school's least positive climate rating among the 3-year block scheduled schools.

Student discipline. Similar to Frankfort, for most infractions Blingham used a step process that included detention, suspension, and expulsion. Unlike at Frankfort, Blingham teachers said administrators were lax with discipline, inconsistent and not always supportive of teachers. Habitual offenders got away with the same infractions time after time, while infrequent offenders might be handled sternly. Although the principal stepped in at times, he was not thought effective. In short, teachers felt that consequences applied by the disciplinarian in many cases did not deter misbehaviors.

A security officer alternated his hours between the high school and the middle school campuses during each school day. According to both the principal and the teachers who were interviewed, the officer was a factor in stemming the incidence of school fights. However, the principal said the most effective deterrents were the zero tolerance policy and an understanding by students that those who fought would go to jail.

On the day of the site visit, observers noted Blingham teachers at classroom doors during transitions between classes, and the security officer in the halls. Unlike Frankfort, students were out of classrooms during instructional times. There was little if any supervision of these students who walked the grounds, talked and visited in halls, and used outdoor public telephones during class times. The principal attributed this problem to teacher inconsistency with discipline, saying that teachers who consistently enforced discipline had no problems with students. On the other hand, interviewed teachers said the school needed more work with its discipline program, since some student misbehaviors were not being deterred. One teacher indicated more problems outside rather than inside classrooms, which observational data supported.

According to interviewed teachers, most student behavior was acceptable, but isolated misbehaviors like disrespect and tardiness were repeated problems. "The kids are good, the structure is too loose," said one teacher, while another indicated standards had gradually eased during her tenure at the school, saying "we don't enforce the dress code anymore. We used to, but now nobody cares."

Both principal and teachers said the low attendance rate (89%) was "terrible" and contributed to high failure rates. While all of those who were interviewed said they had hoped block scheduling would encourage attendance, absenteeism rates, in fact, worsened. The problem was magnified by the pace of 4X4 scheduling, in which each class was equivalent to two classes in a traditional schedule. Furthermore, the principal said teacher absenteeism was higher than usual.

The principal and teachers offered contradictory opinions about causes of discipline trouble. The principal attributed tardiness and class cutting to expectations of individual teachers, while teachers complained there were no authentic consequences to deter misbehavior. Teachers indicated on the questionnaire that verbal abuse was not problematic in classes. However, the principal said that teacher censure of students outside of class often was met with hostility, as though students thought teachers had no authority over them except in the classroom.

Regarding illegal drugs, those who were interviewed claimed that drugs were more of a problem in town than at school. A recent police raid in the community had netted several current and former students. Still, the principal maintained that there were no real drug problems at school, but added that students were "pretty good at avoiding detection."

Faculty collegiality. Responses to questionnaire items and interview questions about faculty collegiality suggested divisiveness. The principal and some teachers reported good relationships, while other teachers claimed problems. The principal described the faculty as "a pretty cordial group" who worked well together and had good relationships. Several teachers likewise were positive, saying that within departments teachers shared materials and methods, and were "supportive." On the other hand, there were faculty complaints about teachers with low expectations who often showed movies rather than teaching, which caused hardship for other teachers. One teacher explained, "It is a major problem for teachers who do expect work, when others do not."

Interviewed teachers at Blingham used the word "collegiality" to describe a situation more akin to job satisfaction. One teacher attributed relationship problems to the many duties other than instruction (e.g., increased discipline and attendance paperwork, telephone calls to parents, parent meetings) that had become part of a teacher's job at Blingham, and that negatively impacted teacher morale at the school. Teachers indicated that overall faculty attitudes were "not good, but justifiably so." They explained that at the beginning of the school year, teachers asked administrators to crack down on discipline, particularly on tardiness and the dress code, and to forbid student possession of telephones and beepers at school. According to the teachers interviewed, the principal responded by saying there were always exceptions. In direct contrast to the Frankfort administrative stance, administrators at Blingham claimed they could not prevent students from having telephones or beepers at school. The result, according to one teacher who was interviewed, was that "from that moment on, teacher attitudes have definitely been affected." A teacher recalled an incident when a student's telephone rang during class, and she took the phone away from the student. The student challenged her right to do so, forcing her to take valuable instructional time to handle the incident. She continued, "It's exhausting, and most of the time the student does not suffer any consequences except in the classroom. And this definitely affects teacher attitudes."

Obstacles to teaching. The high absenteeism rate at Blingham led to problems because students missed tests. Students needed to make up missed tests quickly, since instruction moved rapidly. Many students did not have transportation to get to school early or to stay late, and time for completing most tests took longer than the short lunch period allowed, so teachers often had to use class time to give the makeup tests. This presented a dilemma for teachers. Should the student use class time to make up the test, thus missing valuable instruction that was taking place? Or should the student pay attention in class to keep up with instruction, thus delaying the makeup test and leading to the further disadvantage of taking tests out of sequence? In either case, said teachers, there were serious problems with instruction and/or grading.

Blingham teachers described "continuous" paperwork that interfered with teaching. Discipline procedures put the burden upon teachers to not only document an incident but also give a written explanation for prior circumstances leading to the referral. One teacher said,

"Paper all the time, to document everything, and then when the student goes to the office, there's just no real follow-through. This takes a whole lot of my time." Unlike at Frankfort where teacher time was protected, Blingham teachers felt assigned responsibilities that should not be their burden infringed upon instructional and planning time. For example, each time a student in any class accumulated three absences, teachers had to first call to inform the parents, then send a letter to the parents, and finally notify the guidance office about excessive absences. In addition, faculty members often were asked to meet with parents about attendance.

Other teacher time complaints coincided with Frankfort teacher reports. Blingham teachers had to provide written assignments for students out of the classroom for discipline. Also, due to the 4X4 scheduling pace, report cards went home every four and one-half weeks, with progress reports going home between report cards. This frequency of averaging and reporting grades took an inordinate amount of time, and teachers looked forward to a computerized grading program that administrators planned to implement the next school year.

More than student inability, according to teachers, it was poor student work ethic that impeded teaching. In an interview, one teacher claimed "even the 'A' students are lazy," adding that many students openly opposed attending school, saying they were forced by the court system to do so. Capturing and holding student attention was said to be a significant teaching problem that had not been eased by the implementation of 4X4 scheduling.

Blingham teachers described "a pervasive problem about missing school that comes out of the homes." According to teachers interviewed, many habitually absent students made no attempt to make up work they had missed, considering their absence more the teacher's problem. The teachers described the student attitude as one of "you've got to teach me what I missed." In the same vein, the principal cited poor parental attitudes and low expectations as a substantial interference with teaching and learning at Blingham. Parents made excuses for students, he said, and students then adopted the same attitude. Even though many students had ability, they would not perform. The work ethic problem was not confined to weaker students, said teachers; many good students and their parents were concerned more about grades than what was actually learned at school. For example, it was not uncommon for a student to drop a challenging class to take an easier course in order to make a better grade. There was little concern about acquiring the knowledge needed for later life experiences.

As at Frankfort, Blingham teachers said student jobs posed a substantial interference to teaching and learning. Teachers indicated many students worked for "fad clothes, a better car, or more gasoline," with their value systems putting school low on their list of priorities. One teacher described school as only "a very small part of their important life. Their important life is their social life and the things that they can buy."

An interviewed Blingham teacher offered as one explanation for the work ethic problem that "the education establishment has come to believe that school must entertain students" rather than that students must discipline themselves to work at school because it is necessary. Because a burden to keep students happy and entertained had been placed on teachers, she said, students often set the standard as to what is fun. She used as an example a teacher's challenging students to draw conclusions or make predictions, in which case students might set limits about how far a

teacher could be allowed to challenge them. She described the student attitude as, "Wait a minute, that's a little bit too hard, we're not going to go that far." One 25-year veteran said this was a group phenomenon today with students who, as a whole class "sort of set the limits as to how far . . . and, of course, they will screw up if you force it, so that no one in the class can get the material."

On the day of the Blingham site visit, observers noted that intercom use was a significant interference with teaching. On the day of the interviews, the intercom was used repeatedly, with groups of students called every 15 minutes to report to the health center. During interviews, one teacher angrily said, "You're asking about teaching and learning. We're in the middle of teaching, and this is going on. This has been going on for weeks, for weeks. This is a senior exam day, and they are doing that." The teachers who were interviewed voiced serious annoyance about the administration's use of the intercom during instructional times.

Staff development. Prior to adopting the new scheduling format at the school, Blingham teachers visited several block scheduled schools, and teachers from those schools in turn visited Blingham to train the teachers on-site. According to the interviewed teachers, this resulted in most faculty members coming to believe in block scheduling and the changes in instructional strategies that needed to be made. The principal also described "a new youth movement" among the faculty. He said that the newer teachers brought the latest instructional techniques and ideas to Blingham, and that teachers who had been in the profession for a while became receptive to learning innovative instructional strategies from the newer teachers.

As part of the initial staff development effort, teachers from other schools worked with Blingham teachers as a large group, and then in smaller departmental groups so that trainers could share subject-specific, mostly hands-on instructional techniques. Departmental scope-and-sequence was also addressed with this staff development, which the principal said was devoted "big time" to new strategies. Prior to the scheduling change, teachers said the API orchestrated "well done" in-services concerning instructional practices, lesson planning, time management, and 4-MAT training. Since block scheduling was implemented, however, teachers said there had been no regular staff development plan at the school. Rather, staff development days were directed by central office personnel and not specific to the needs of Blingham teachers, with some sessions more beneficial than others. This was unlike Frankfort, where on-going staff development addressed school needs. Some Blingham teachers said there was a real need for regular, site-specific professional development at the school.

Block scheduling. According to teachers, the movement to block scheduling came from the bottom up, with teachers seeking the change because they found the seven-period schedule "a nightmare." During the 2-year study period before the new format was adopted, teachers said, the faculty was "excited for once," hoping the change to block scheduling would positively affect dropout and absenteeism rates. In fact, as shown in Table 2, the dropout rate did improve, but absenteeism worsened. Administrators and faculty further hoped to see better grades and fewer discipline problems with the change to 4X4 scheduling. Data in Table 2 supported slight improvement in standardized test performance. Also, the principal and teachers said fighting incidents had decreased since the scheduling change, which could explain the reduced rate for out-of-school suspensions and/or expulsions at the school, as shown in Table 2.

Interviewed teachers unanimously opposed returning to a traditional scheduling format, noting advantages of block scheduling. For example, science teachers said they were able to offer more hands-on experiments during 90-minute time blocks that allowed continuity in taking out all materials, performing the experiment, and putting away the materials. Most importantly, teachers said they became believers that good things could happen at Blingham. Further, they said that involving the whole faculty in studying and implementing block scheduling had helped to motivate teachers to change instructional strategies for the better of the school.

Summary. Although Blingham was below state averages on attendance and academic indicators, student achievement indicators suggested a minor positive effect with block scheduling. The dropout rate improved, while attendance worsened. Teachers were frustrated by the laissez-faire administration, especially regarding discipline. Teachers who were interviewed had to assume responsibilities they felt should not be their work, and complained about low expectations and nonprofessional attitudes of some faculty members. Departmental connections were tenuous, with faculty relationships as described by teachers more cordial then collegial.

Staff development was limited to two district-led professional development days each year, with few if any site-specific training opportunities. Teachers praised block scheduling for bringing to the school new instructional strategies, more hands-on activities, and continuity in exploring topics.

Discussion

Teachers at both Frankfort and Blingham commented on improved discipline and academic performance, suggesting that these anticipated benefits did accrue from block scheduling. However, teachers at both schools reported markedly different experiences with block scheduling, as illustrated in Table 3. Economically, there were striking inequities in the two districts. The district in which Frankfort was located enjoyed a good district salary scale in combination with a location near a densely populated area which allowed selection from among a pool of qualified applicants for available positions. Applicants who best fit district philosophy were hired. Abundant staff development opportunities maximized instructional expertise, and school board members were highly supportive of school personnel.

In contrast, the Blingham district was in a low SES area. A low to average salary scale made it difficult to attract applicants, especially since the district was located among wealthier districts which offered highly competitive salaries. Furthermore, the district's rural location limited the supply of qualified applicants. Often, the district was forced to hire whomever was available for each open position, and sometimes this meant hiring untrained and uncertified teachers. While Frankfort's physical and instructional resources were enhanced, Blingham struggled to maintain the status quo. The school board often was not supportive of school personnel.

Frankfort administrators supported teachers, handled discipline consistently, were respected by teachers and staff, and had high expectations for instruction and student achievement. Conversely, the laissez-faire Blingham administrative leadership style undermined

advantages block scheduling might have brought. During interviews, most teacher complaints focused on administrative inconsistency in handling discipline. The principal reported above average expectations for teaching and learning, yet the frequent sacrifice of instructional time to student misbehavior and interruptions gave a different message.

Visionary leadership at Frankfort was directed toward future improvement. Acceptable student behavior was viewed as imperative to attaining instructional effectiveness. A highly centralized structure handled discipline, with extra personnel hired for duty, attendance, and in-school suspensions. Since teachers did not bear the major burden for discipline, they were free to concentrate on instruction. Again, the emphasis was proactive, with a well-defined plan which anticipated each eventuality. This resulted in minimal student misbehaviors, with students focused on instruction.

At Blingham, a management approach to running the school had administrators reacting as issues surfaced. This more reactive stance resulted in habitual student absenteeism and tardiness, which undermined instructional efforts. Further, the central structure often failed to protect instructional time or support teachers, while it enabled student misbehavior. Discipline paperwork and parent contact burdens fell heavily upon teachers. Perhaps the best example concerns student telephones and beepers, which were not allowed at Frankfort, while not restricted at Blingham.

There were also differences regarding academic press. Frankfort administrators, teachers, and students focused on teaching and learning, with instructional time protected and no interruptions allowed. On-going, site-specific staff development was approached through faculty study groups as well as regular in-servicing. At Blingham, intercom interruptions, disciplinary incidents, and dismissals for non-instructional activities robbed students of instructional time. Infrequent district-led staff development was not targeted to specific school needs.

Frankfort teachers were energized by professional activities in a departmental structure that encouraged collegiality. Strong, supportive leadership, good student attitudes, good pay, excellent teaching conditions, and freedom from non-teaching chores (e.g., yard and hall duty, attendance paperwork, discipline follow-up) bolstered morale. In contrast, Blingham teachers complained about administrators, students, and teaching conditions, with administrative inaction and poor communications presenting barriers. Often, teachers had no forewarning of school activities or events, and got no feedback on discipline referrals unless they pressed for the information in the office. Lack of structure in the everyday school operation limited teacher collegiality. Morale was low due to ineffective leadership; inconsistent handling of disciplinary incidents; pervasive student absenteeism and tardiness; poor student attitudes toward learning; poor teaching conditions; and lack of support from both administrators and the school board.

Although disparity in district financial resources substantially contributed to differences between the schools, it would be inaccurate to attribute these differences exclusively to funding. It is not simply having resources that assures success, but rather knowing what to do with resources.

Wisely using its resources, Frankfort focused on the central mission of instructional effectiveness, systematically eliminating barriers that surfaced. Department heads assumed formative supervisory roles, and the departmental structure enhanced teacher communications, professionalism, and collegiality. Administrative roles supported instruction by protecting instructional time, controlling student behavior, and communicating effectively with both teachers and students. Aggressive staff development kept teachers current on classroom strategies and research, and new teachers were trained in advance to assure immediate instructional productivity in the 90-minute blocks.

Staff development as a proactive strategy not only effects change; it also sustains change. Initial staff development at both schools prepared instructors for teaching in the longer time blocks, but the major discrepancy between the schools occurred after block scheduling was adopted. At Frankfort staff development increased, while at Blingham it waned.

The effect of block scheduling on discipline cannot be judged on its own merits, since administrative philosophy regarding student control is a key factor in how well student behaviors are managed. Funding disparity played a role in leadership within these two schools. The salary scale at Frankfort, in combination with funding for improvements and a reputation for progressiveness, attracted a staff of enterprising administrators and teachers who were aligned with the central mission of the school and district. With such personnel in place, the shared approach at Frankfort resulted in innovative leadership with a focused mission.

Less favorable financial resources, however, cannot excuse the laissez-faire approach to leadership at Blingham. Even after teachers took the initiative to request a more proactive stance on discipline, there was limited administrative support of teacher disciplinary efforts, just as there was limited school board support of both teachers and administrators. The Frankfort success resulted from a concerted effort of school board, administrators, and teachers to improve instruction. Differences between these two schools were due not only to disparity in available financial resources, but also to very basic differences in administrative philosophy.

According to Hord and Huling-Austin (1986), after an innovation has been initiated, the principal is a key player in the on-going change process, with a support function that is critical to success. Hall (1988) echoes this assertion, noting that the single most important variable in successful change efforts is the leadership style of the principal. Our study points out that principal leadership ability, commitment, and focus differentiated Franklin and Blingham, not the scheduling pattern.

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Table 1 Demographic Description of the Schools and Their Districts

Item	Frankfort High School	Blingham High School	State Average
School District			
Community Type	Suburban	Rural	N/A
Percentage of population below poverty level	15%	31%	23.6%
Per capita income	$20,700	$16,300	$19,700
Average full-time teacher salary	$35,200	$27,900	$31,100
Per pupil expenditure	$ 8,500	$ 5,200	$ 5,600
The School			
Faculty with master's degree or higher	43%	39%	39.8%
Student population	1,450	868	
African American	34%	40%	
European American	65%	60%	
Students in free/reduced-price lunch program	34%	34%	
Percent of college-bound Students	41%	18%	

Table 2 Achievement and Student Participation Indicators for the Case Study Schools and the State

	School Year		
	1995-96	1996-97	1997-98
ACT composite			
Frankfort	19.2	19.3	19.6
Blingham	17.6	17.5	17.7
State[a]	19.4	19.4	19.5
Graduation exit examination passing rate			
Language arts			
Frankfort	89	91	94
Blingham	83	84	86
State	86	84	87
Mathematics			
Frankfort	86	92	87
Blingham	68	69	64
State	77	77	76
Student attendance			
Frankfort	93.9%	95.4%	94.3%
Blingham	90.7%	92.0%	88.0%
State	90.6%	91.1%	90.8%
Student dropouts			
Frankfort	5.8%	3.5%	5.1%
Blingham	12.4%	9.1%	10.7%
State	12.2%	9.6%	11.0%
In-school suspensions[b]			
Frankfort		22.6%	29.3%
Blingham		12.8%	12.0%
State		8.7%	12.0%
Out-of-school suspensions[b]			
Frankfort		27.2%	1.0%
Blingham		2.5%	1.2%
State		15.7%	15.8%
Expulsions[b]			
Frankfort		0.5%	0.1%
Blingham		1.1%	0.2%
State		0.8%	0.8%

[a]Includes both public and nonpublic schools.

[b]Because of reporting differences among districts, no suspension or expulsion averages are shown prior to 1996-97.

Table 3 Dimensions of Contrast for Frankfort and Blingham High Schools

Dimension of Contrast	Frankfort High School	Blingham High School
School district	Ample resources; selective personnel recruitment; consistent support of school personnel	Limited resources; recruitment problems; inconsistent support of school personnel
School leadership	Shared decision-making; proactive nature; focus on instruction; high expectations	Little teacher input allowed; laissez-fair style; reactive in nature; inconsistent expectations
Student discipline	Student control viewed as necessary to school goal of instructional effectiveness	Inconsistent application of of consequences; conflict between administrators and teachers; high absenteeism
Faculty collegiality	Encouraged by departmental structure; good teacher morale; regular staff development; supportive leadership	Hampered by weak departmental structure; low teacher morale; infrequent staff development; lack of administrative support
Academic press	High expectations for teaching and learning; entire school focused on instruction	Frequent sacrifice of instructional time; lack of emphasis on instruction; too many responsibilities other than teaching
Obstacles to teaching	Systematically eliminated through innovative solutions	Discipline; frequent class interruptions; paperwork; parent contact duties
Professional emphasis	Frequent goal-oriented staff development; well organized departmental structure	Lack of staff development; poor communications; weak departmental structure; laissez-faire leadership

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